

Sight Distance Study
For
Spinali Subdivision

TM 5482



Prepared By
Lintvedt, McColl and Associates
2810 Camino del Rio South #200
San Diego CA 92108

January 6, 2009

Introduction

The proposed intersection of the new private road, Spinali Place, is located approximately 450' west of the intersection of Vista Grande Road along Hillsdale Road. Hillsdale Road is a 2-lane road running east and west at the proposed new intersection. The width is approximately 24' at this location. The intersection is located at the crest of a vertical curve on Hillsdale Road. The intersection of Vista Grande and Hillsdale Road is an all way stop configuration. The area is posted at 40 mph.

A speed survey, at the proposed intersection, was preformed by Darnell and Associates on June 1, 2006. That report is included in Appendix A of this document.

The 85th percentile speed for the eastbound traffic was 38 mph and 42 mph for the westbound traffic.

These speed will be used as the design criteria for this study. Caltrans standards were used in the analysis. Exhibits A – C show the plan and profile views used in the analysis.

Analysis

Profiles were plotted using the existing terrain and the proposed grading to create the intersection.

Exhibit 'A' is a plan view that shows the lines of sight and the topography.

Exhibit 'B' shows the ground profile looking west from the intersection with the line of sight superimposed on the profile.

Exhibit 'C' shows the ground profile looking east from the intersection with the line of sight superimposed on the profile.

Sight Distance to the West

As can be seen on Exhibit 'B' the sight distance is approximately 368' for a vehicle exiting the private road and a vehicle approaching from the west. The normal required intersectional distance is 380'. This 12' shortfall is deemed not significant for the following reasons.

The conflict point for this direction of sight would be for the exiting vehicle to head east. That being the case the vehicle entering the road would be accelerating away from the on-coming vehicle. At 38 mph the on-coming vehicle would have traveled that 12' in less then 1/4 sec. After traveling that 12' there would be a

clear view of the entering vehicle. The upgrade of Hillsdale at that point is +6.5%.

In addition we are proposing to re- stripe the area between the two intersections, Wind River Rd and Vista Grande with a two-way left lane. This will give a place of refuge for cars exiting to the east as well as for the vehicles making left hand turn into The proposed Spinali Place and Varkas .

Worst-case scenario would be if the entering vehicle were to stop upon entering the eastbound lane. At that point the eastbound approaching vehicle would travel the 368' at 38 mph in 6.6 seconds if there were no evasive action taken such as taking their foot off the accelerator and braking.

Referring to Caltrans Sight Distance Standards table 201.1 and Stopping Sight Distance graph, figure 201.4, the required stopping sight distance for 38 mph is 280'. Which is much less than the 368'. Taking into consideration the +6.5% grade, normal perception/reaction times and the Caltrans charts, the 368' available after the construction and re-striping of the intersection, it is deemed adequate for the intersectional sight distance to the west.

Sight Distance to the East

As can be seen in Exhibit 'C' there is adequate sight distance to the intersection of Vista Grande Road which is an all way stop intersection.

Appendix

Darnell & ASSOCIATES, INC.

TRANSPORTATION PLANNING & TRAFFIC ENGINEERING

June 6th, 2006

Joseph Spinali
P.O. Box 503356
San Diego, CA 92150

D&A Ref. No: 060513

Subject: Speed Surveys for Hillsdale Road at Varkas Drive in the Valle De Oro area of San Diego County, California

Dear Mr. Spinali:

In accordance with your authorization, Darnell & Associates, Inc. has completed the speed surveys on Hillsdale Road at Varkas Drive in the Valle De Oro area of San Diego County, California. The speed surveys were conducted on Thursday, June 1st, 2006 during the off peak hours. Table 1 summarizes the results of the survey. As shown in Table 1, the 85th percentile speed was found to be 38 miles per hour (mph) for eastbound traffic and 42 mph for westbound traffic. (A copy of the speed surveys are provided in the appendix to this report.)


Table 1 Summary of Speed Surveys for Hillsdale Road at Varkas Drive						
Direction of Travel	# of Vehicles Observed	Range of Speed (mph)	10 mph Pace	% of Vehicles in Pace	Average Speed (mph)	85 th Percentile Speed (mph)
Eastbound	100	22 to 43	29 to 38	79%	33	38
Westbound	100	26 to 53	33 to 42	71%	37	42
Speed Surveys were conducted on Thursday, June 1 st , 2006 during the off peak hours mph = miles per hour						

If you have any questions, please feel free to contact the office.

Sincerely,

DARNELL & ASSOCIATES, INC.


Vonessa Centracchio
Junior Engineer Planning Aid


Vicki S Haskell, P.E.
Senior Transportation Engineer
RCE 63754



Date Signed: 06-06-06

VSH/VLC
060513-HillsdaleRoadAtVarkasSpeedSurvey-ltr.wpd/06-06

APPENDIX

- Speed Surveys for Hillsdale Road and Varkas Drive

Project Name:	60513
Street:	Hillsdale @ Varkas
Date Observed:	6/1/2006
Time of Count:	12:45 AM - 1:30 PM
Posted Speed Limit:	40 mph
Direction Observed:	Eastbound
Observer:	Vonessa Centracchio

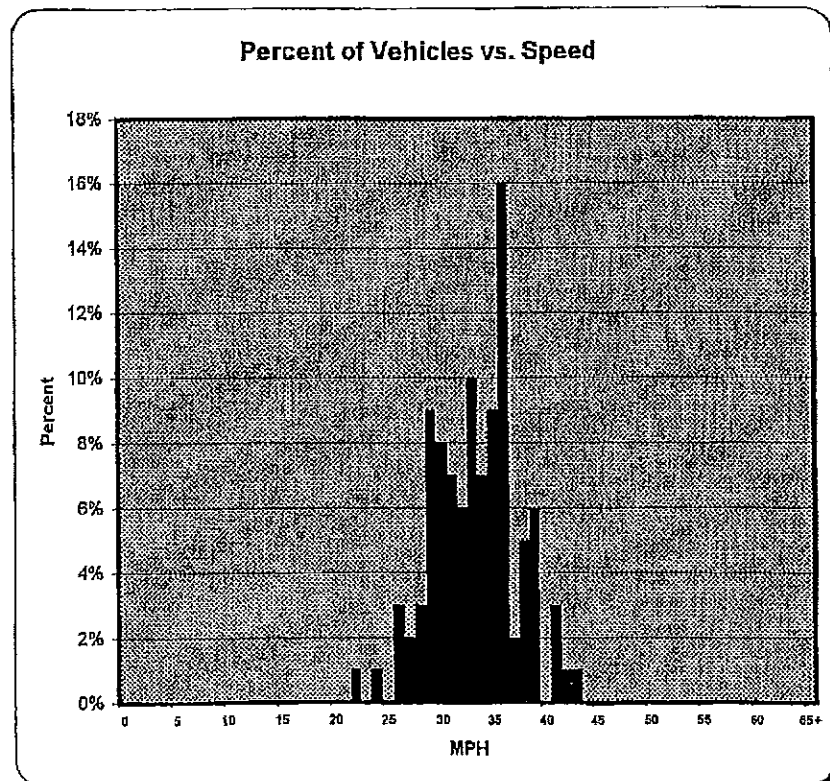
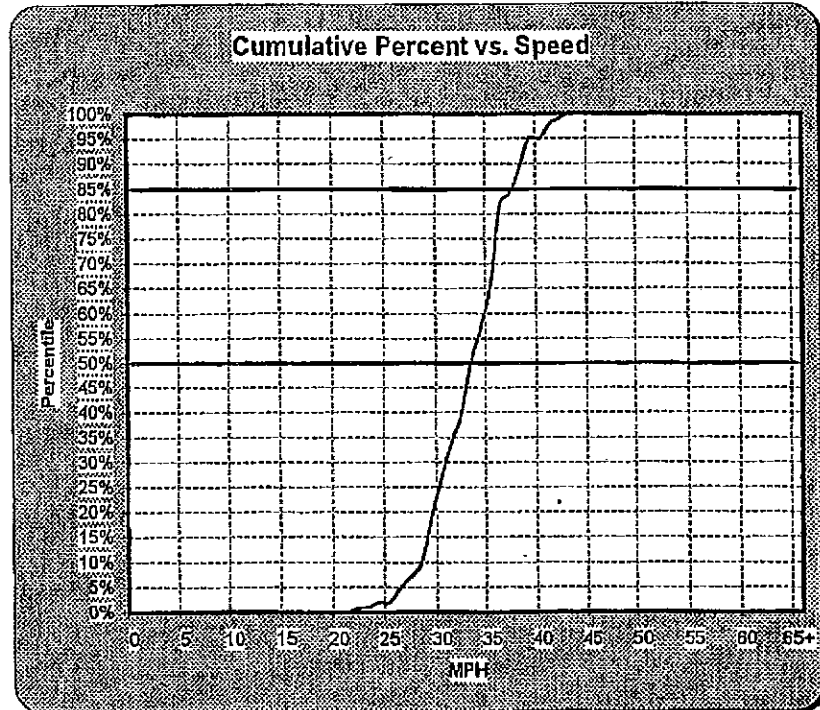
60513

Date of Count: 6/1/2006
 Beginning Time: 12:45 AM - 1:30 PM
 Direction Counted: Eastbound
 Posted Speed Limit: 40 mph
 Observer: Vonessa Centracchio

50th Percentile Speed: 33 mph
 85th Percentile Speed: 38 mph
 Average Speed: 33.4 mph
 Range of Speeds Observed: 22 - 43 mph
 Number of Vehicles Observed: 100

10 MPH Pace: 29 - 38 mph
 Percent Within Pace: 79.0%
 Percent Over Pace Speed: 11.0%
 Percent Under Pace Speed: 10.0%

MPH	Number of Vehicles	Percent of Count	Cumulative Percent of Count
0	0	0.0%	0.0%
1	0	0.0%	0.0%
2	0	0.0%	0.0%
3	0	0.0%	0.0%
4	0	0.0%	0.0%
5	0	0.0%	0.0%
6	0	0.0%	0.0%
7	0	0.0%	0.0%
8	0	0.0%	0.0%
9	0	0.0%	0.0%
10	0	0.0%	0.0%
11	0	0.0%	0.0%
12	0	0.0%	0.0%
13	0	0.0%	0.0%
14	0	0.0%	0.0%
15	0	0.0%	0.0%
16	0	0.0%	0.0%
17	0	0.0%	0.0%
18	0	0.0%	0.0%
19	0	0.0%	0.0%
20	0	0.0%	0.0%
21	0	0.0%	0.0%
22	1	1.0%	1.0%
23	0	0.0%	1.0%
24	1	1.0%	2.0%
25	0	0.0%	2.0%
26	3	3.0%	5.0%
27	2	2.0%	7.0%
28	3	3.0%	10.0%
29	9	9.0%	19.0%
30	8	8.0%	27.0%
31	7	7.0%	34.0%
32	6	6.0%	40.0%
33	10	10.0%	50.0%
34	7	7.0%	57.0%
35	9	9.0%	66.0%
36	16	16.0%	82.0%
37	2	2.0%	84.0%
38	5	5.0%	89.0%
39	6	6.0%	95.0%
40	0	0.0%	95.0%
41	3	3.0%	98.0%
42	1	1.0%	99.0%
43	1	1.0%	100.0%
44	0	0.0%	100.0%
45	0	0.0%	100.0%
46	0	0.0%	100.0%
47	0	0.0%	100.0%
48	0	0.0%	100.0%
49	0	0.0%	100.0%
50	0	0.0%	100.0%
51	0	0.0%	100.0%
52	0	0.0%	100.0%
53	0	0.0%	100.0%
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55	0	0.0%	100.0%
56	0	0.0%	100.0%
57	0	0.0%	100.0%
58	0	0.0%	100.0%
59	0	0.0%	100.0%
60	0	0.0%	100.0%
61	0	0.0%	100.0%
62	0	0.0%	100.0%
63	0	0.0%	100.0%
64	0	0.0%	100.0%
65+	0	0.0%	100.0%



Project Name:	60513
Street:	Hillsdale @ Varkas
Date Observed:	6/1/2006
Time of Count:	12:45 AM - 1:30 PM
Posted Speed Limit:	40 mph
Direction Observed:	Westbound
Observer:	Vonessa Centracchio

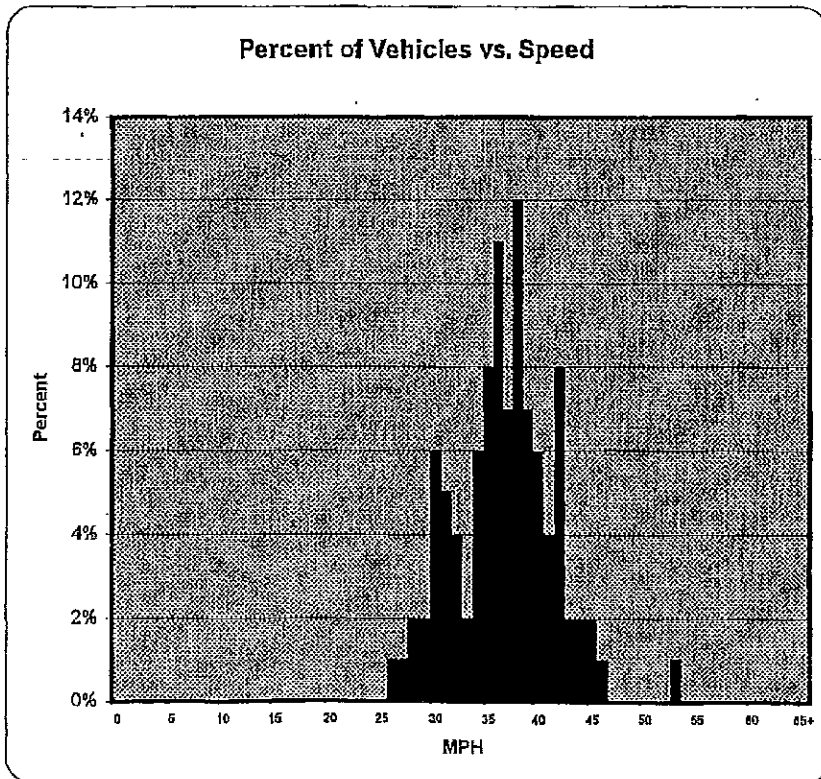
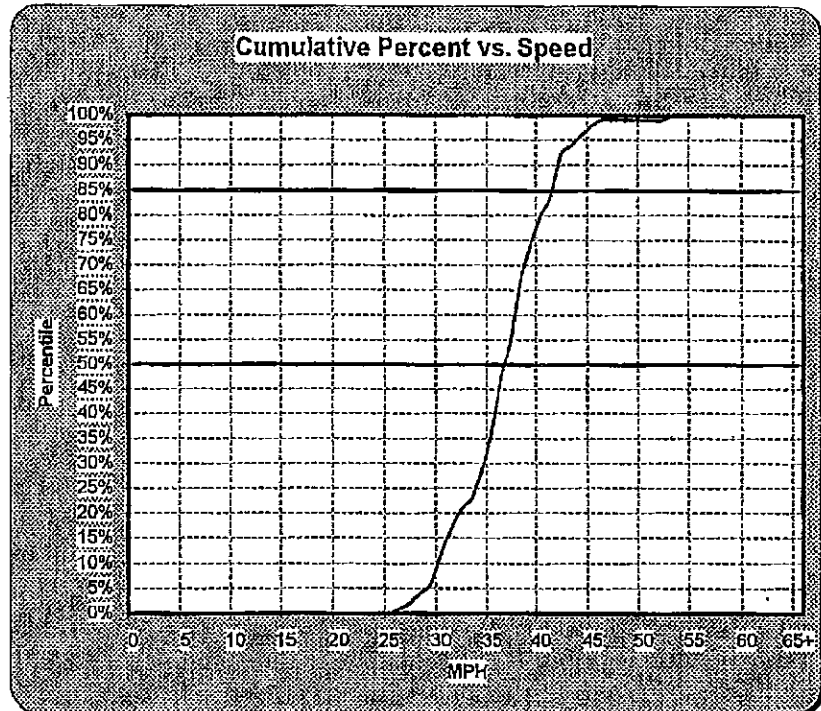
60513

Date of Count: 6/1/2006
 Beginning Time: 12:45 AM - 1:30 PM
 Direction Counted: Westbound
 Posted Speed Limit: 40 mph
 Observer: Vonessa Centracchio

50th Percentile Speed: 37 mph
 85th Percentile Speed: 42 mph
 Average Speed: 36.7 mph
 Range of Speeds Observed: 26 - 63 mph
 Number of Vehicles Observed: 100

10 MPH Pace: 33 - 42 mph
 Percent Within Pace: 71.0%
 Percent Over Pace Speed: 8.0%
 Percent Under Pace Speed: 21.0%

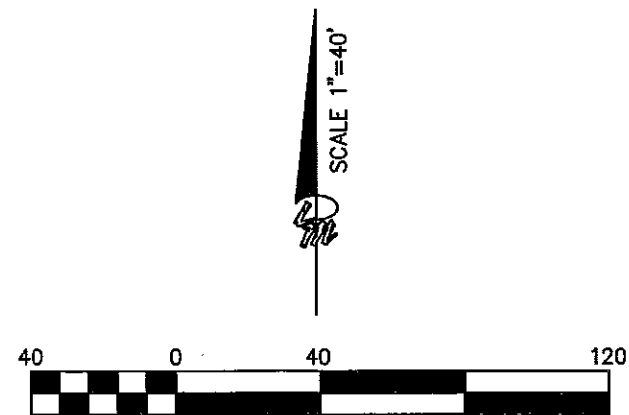
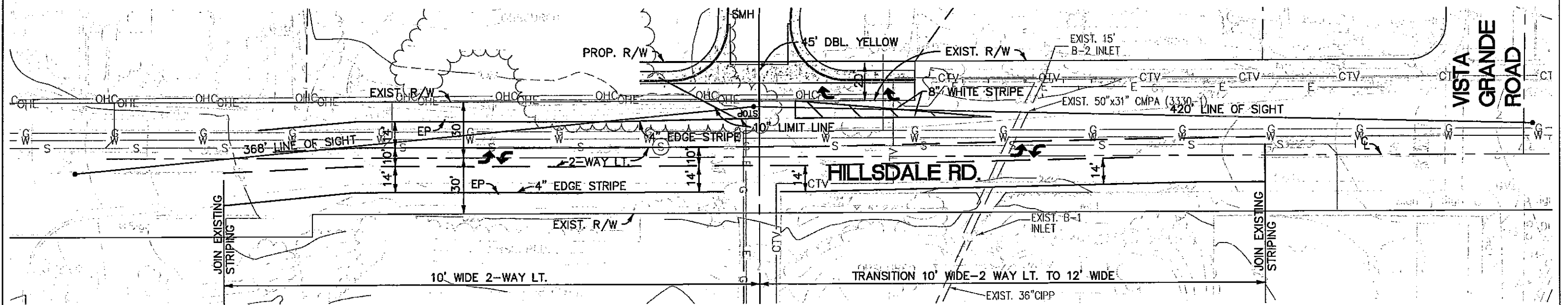
MPH	Number of Vehicles	Percent of Count	Cumulative Percent of Count
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3	0	0.0%	0.0%
4	0	0.0%	0.0%
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6	0	0.0%	0.0%
7	0	0.0%	0.0%
8	0	0.0%	0.0%
9	0	0.0%	0.0%
10	0	0.0%	0.0%
11	0	0.0%	0.0%
12	0	0.0%	0.0%
13	0	0.0%	0.0%
14	0	0.0%	0.0%
15	0	0.0%	0.0%
16	0	0.0%	0.0%
17	0	0.0%	0.0%
18	0	0.0%	0.0%
19	0	0.0%	0.0%
20	0	0.0%	0.0%
21	0	0.0%	0.0%
22	0	0.0%	0.0%
23	0	0.0%	0.0%
24	0	0.0%	0.0%
25	0	0.0%	0.0%
26	1	1.0%	1.0%
27	1	1.0%	2.0%
28	2	2.0%	4.0%
29	2	2.0%	6.0%
30	6	6.0%	12.0%
31	5	5.0%	17.0%
32	4	4.0%	21.0%
33	2	2.0%	23.0%
34	6	6.0%	29.0%
35	8	8.0%	37.0%
36	11	11.0%	48.0%
37	7	7.0%	55.0%
38	12	12.0%	67.0%
39	7	7.0%	74.0%
40	6	6.0%	80.0%
41	4	4.0%	84.0%
42	3	3.0%	87.0%
43	2	2.0%	89.0%
44	2	2.0%	91.0%
45	2	2.0%	93.0%
46	1	1.0%	94.0%
47	0	0.0%	94.0%
48	0	0.0%	94.0%
49	0	0.0%	94.0%
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57	0	0.0%	95.0%
58	0	0.0%	95.0%
59	0	0.0%	95.0%
60	0	0.0%	95.0%
61	0	0.0%	95.0%
62	0	0.0%	95.0%
63	0	0.0%	95.0%
64	0	0.0%	95.0%
65+	0	0.0%	95.0%



6/1/2006


A-4

Exhibits



SIGHT DISTANCE STUDY EXHIBIT "A"

DATE: 1-06-09	W.O. 12511	DRFT: MD	CHK'D BY: AJ
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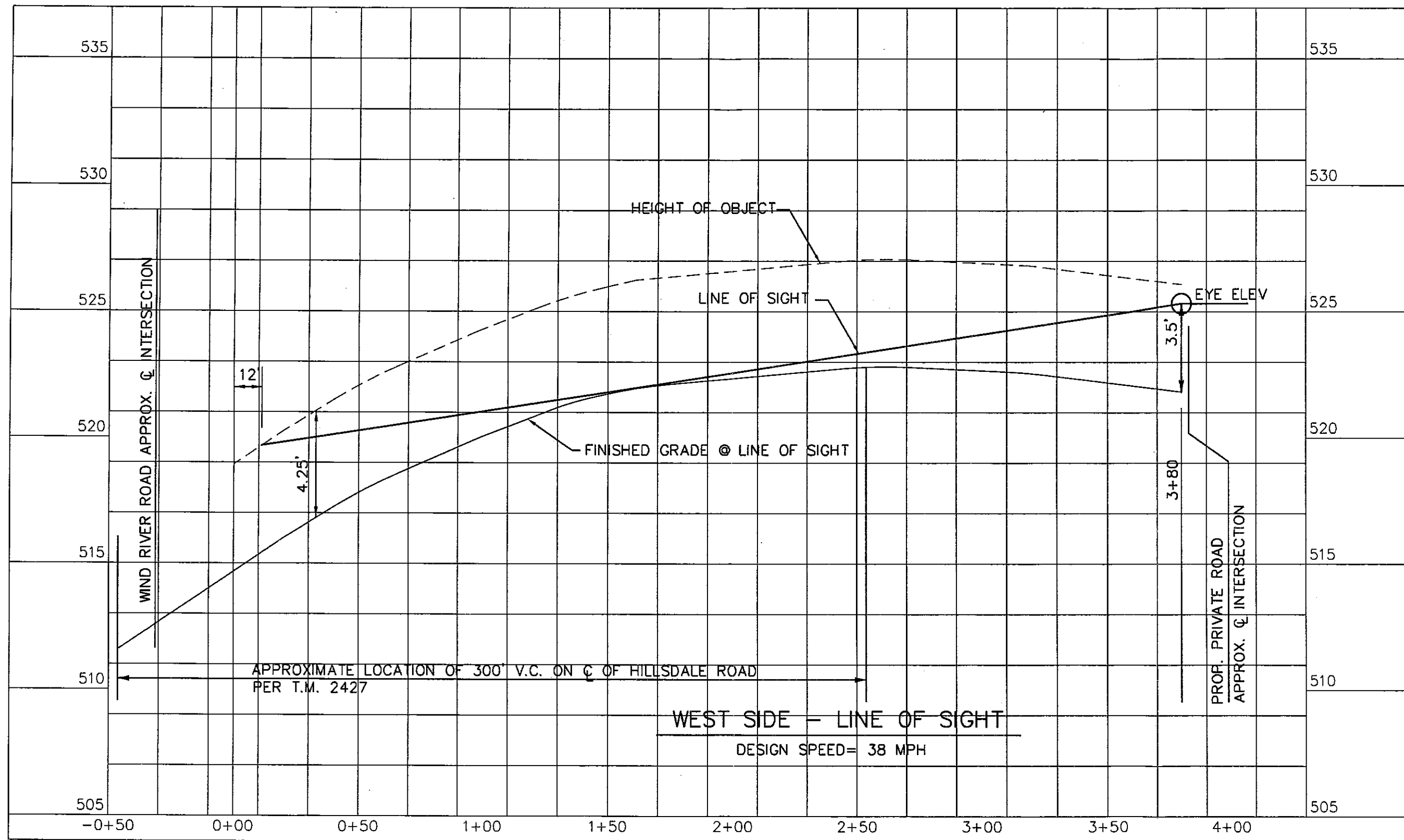
**LINTVEDT, McCOLL
& ASSOCIATES**

2810 Camino Del Rio South, Suite 200, San Diego, CA 92108 ☎(619)294-4440 ✉Fax(619)294-4442

▣ PLANNING

▣ CIVIL ENGINEERING

▣ LAND SURVEYING



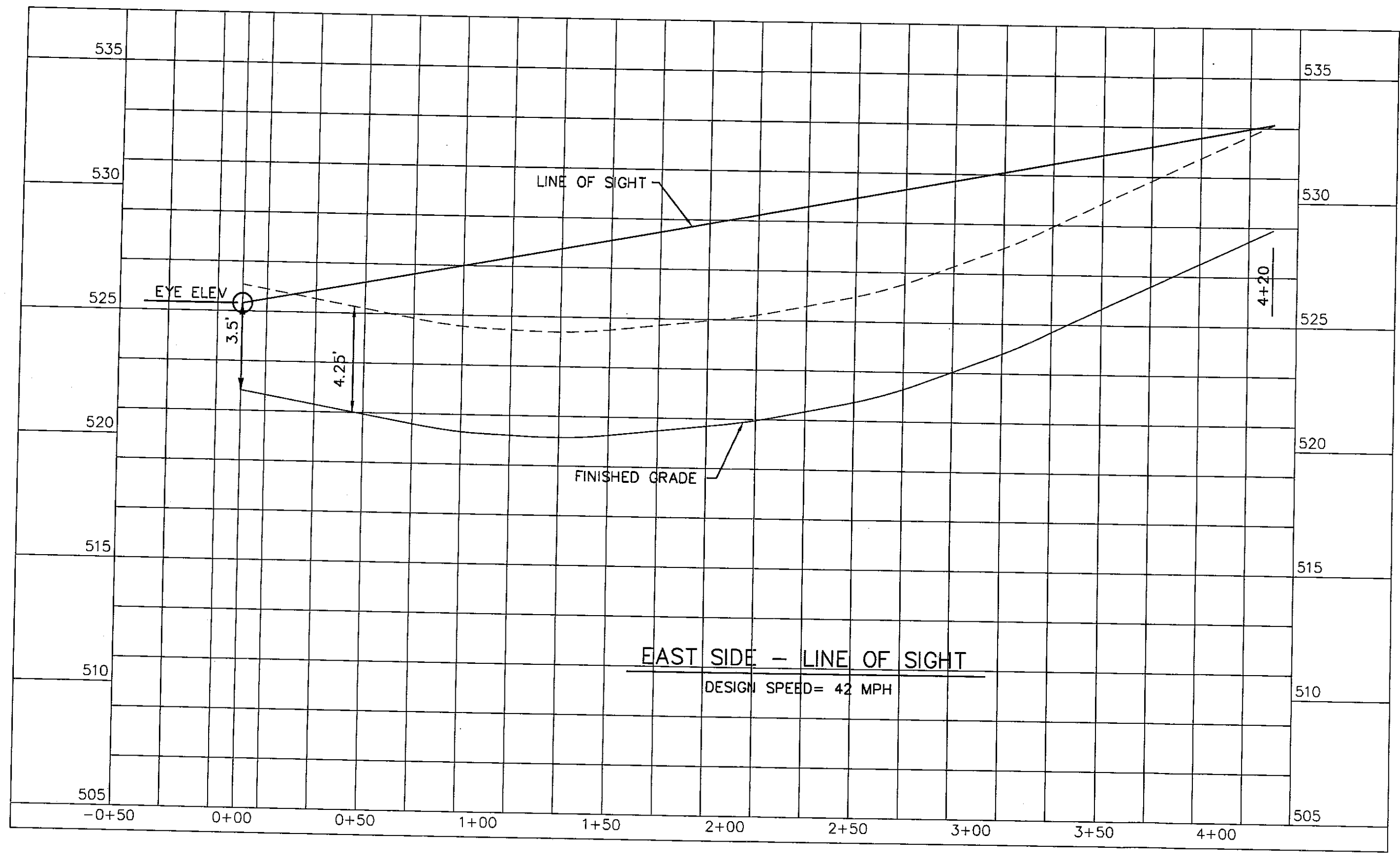
HILLSDALE ROAD

SCALE: HORIZ. 1"=40'
VERT. 1'=4'

SIGHT DISTANCE STUDY

EXHIBIT "B"

Date: 1-06-09



HILLSDALE ROAD
SCALE: HORIZ. 1"=40'
VERT. 1'=4'

SIGHT DISTANCE STUDY
EXHIBIT "C"
Date: 1-06-09